Wilsons MECHANICAL

Commissioning Checklist (Invasive) Auto Calc v2.0 MULTI

-Select System Type-

AHRI#

Customer: Date:

Address: Technician (s)

City Province Postal Code

***RH calculations are not correct for DP temperatures below 32F, all fields need to be filled in with accurate measurements for correct calculations**

Ref. Type R410a Metering Device EEV

Outdoor Unit:	Model #	**Compressor Amp:** Heating A Cooling A	Voltage: L1-L2 L2-L3 L3-L1 VAC
	Serial #	* Total Amperage: Heating A Cooling A	OD Fan Amp: A
Indoor Unit(s) (A B C):	Model #		Voltage: L1-L2 L2-L3 L3-L1 VAC
	Serial #		* Blower Amperage: A A A

Filter, Coil and Blower Wheel Clean ◯ YES ⓘ Verify Air Flow using Manufacturer Specs ◯ YES Fan Speed ☐ High

Check/Inspect all Electrical Wiring and Components ◯ YES Test Condensate Drain ◯ YES Over flow switch wired ◯ YES ◯ N/A

Purge w/ Nitrogen ◯ YES Pressure Test w/ Nitrogen ◯ YES Approx. Length of Pipe Run ft Liquid Line Size ft Vapor line Size ft

Vacuum System (Micron Value) m Vacuum Duration (Approx.) hrs min Add charge for Coil/Line set ◯ YES ◯ N/A (If Yes) lbs

Outdoor Unit	HEATING	COOLING	Indoor Units A B and C	HEATING	COOLING
TET / CTOA		°F ° ±5	ⓘ Input rated manufacturers heating capacity for target delta t	OUTDOOR UNIT RATED HEATING CAPACITY BTU/H @ OAT °F	DB & WB Required for accurate calculation; RATED COOLING CAPACITY BTU/H @ OAT °F
Suction Pressure		PSIG	Rated Capacities	INDOOR UNIT A / INDOOR UNIT B / INDOOR UNIT C BTU/H	
Discharge Pressure		PSIG	Target Delta T	°ΔT	
Compression Ratio	:1	:1	*Entering Air Temp	DB °F	*TEET °F ±3; DB °F WB °F % RH
Suction Line		°F	*Leaving Air Temp	DB °F	DB °F WB °F % RH
Liquid Line		°F	**Actual Delta T** (ΔT)	°	°
Superheat / Subcooling	°SH °SC	°SH °SC		BTU/H	SENSIBLE + LATENT = BTU/H
Discharge / DSH		°F	***Capacities**	TOTAL HEATING CAPACITY BTU/H	SENSIBLE HEAT RATIO ΔH BTU/LB; TOTAL COOLING CAPACITY BTU/H
Outside Air	DB °F WB °F	DB °C DP °F % RH	Power Input	Watts KWh COP	Watts KWh EER
			ⓘ ☐ Verified Air Flow	CFM	Valve Caps installed tightened, Service Valves open? ◯ YES
Entering Water	°F °	°F °	**Total Capacity Within ± 20% of High/Low Range of Rated Capacity?**		RATED HEATING CAPACITY BTU/H HEATING CAPACITY BTU/H VARIATION 0.0%
Leaving Water	°F	°F	◯ YES ◯ NO ◯ N/A If No, Troubleshoot system.		RATED COOLING CAPACITY BTU/H COOLING CAPACITY BTU/H VARIATION 0.0%

*Always use Equipment Test mode Central, (High fan speed; ductless) located in Thermostat to ensure proper readings due to potential air flow changes
All measurements are to be made closest to the unit as possible but out of sight of coil and after a minimum of 15mins of operation in each mode and verified that the unit has reached maximum capacity. Psychrometer is needed to measure Wet Bulb temperature at the unit. The accuracy of the measurement will determine capacity calculation.
Calculations will only be performed for Indoor unit A, they are only accurate when CFM is verified. Please use provided product specs to determine CFM on HIGH fan speed (ductless), ECM readout (constant CFM) or static pressure (constant torque) see info icons and Bold text for links to more info
RH calculations are not correct for Dew Point temperatures below 32F, DP Calculations are not accurate below RH of 50%, RH calculations above DP temperature of 32F are within 1.02% Capacity calculations are within 5%
Calculated Target DeltaT using manufacturers output ratings @ specified Outdoor Air Temperature can be used as a baseline while also checking manufacturers product specifications to verify the unit is operating as the manufacturer intended.
Target Evaporator Temperature or TET = The saturation temperature the evaporator coil should be based on the return air temperature (Standard DTD of 35°F), using a PT chart compare the target saturation temperature to evaporator pressure.
Target Condensing Temperature Over Ambient (CTOA) = This is the target temperature difference of the condensing temperature and the ambient air, please measure the outdoor air temperature in the shade entering the condenser, Calculation assumes a default of 4degrees of subcooling. range of ±5 degrees. This will be 30° over ambient on old units, and 15° for new high efficiency units.

Notes:

Recommendations: